

**New York State
Environmental Investment Program
Capital Project Summary
H.F. Corwin and Son, Inc.**

Project Background

H.F. Corwin and Son, Inc. (HFC) operates a duck farm in Aquebogue in Suffolk County. In business since 1908, HFC produces approximately 800,000 ducks per year. The farm is dedicated to growing White Pekin ducks sold to restaurants throughout the Northeast, and as far away as Hawaii.

HFC generates large quantities of liquid duck manure from its barns. Prior to this project, HFC would discharge this waste into large lagoons located on-site. After settling, the lagoon water would be discharged into sand beds, and ultimately would enter the Peconic Bay Estuary System. A small percentage of the remaining lagoon sludge would be provided free of charge to Long Island Compost, a local compost producer. HFC would spray the rest on local farm fields at its own cost. By investing in this project, HFC would not only help Suffolk County to better protect the waters of the Peconic Bay Estuary System, it would allow the business to grow. HFC's ability to expand was being limited by regulatory limits on its waste treatment process. HFC intended to install a system that would reduce sludge generated, and as a result, its wastewater discharges.

Project Description

HFC implemented a unique waste management system designed by Applied Technologies of Brookfield, WI, that combined an anaerobic process with two aerobic Sequencing Batch Reactors (SBRs).

Barn manures with high solids content are first anaerobically processed to maximize COD removal (Chemical Oxygen Demand, a measure of the biological loading and respiration rates in a waste stream) and to convert TKN (Total Kjeldahl Nitrogen) to ammonia. This anaerobic process reduces waste volume while concurrently producing enough biogas to run the two, 150-HP engines needed to drive the air compressors in the SBRs. Effluent from the anaerobic process is then combined with farm process water and treated aerobically in the SBRs to further reduce nitrogen. The first SBR generates over eight million gallons of reusable water per year, significantly offsetting HFC's annual water purchases.

Project Results

Since the new waste management system has been in place, HFC has been able to invest in capacity (barns, etc.) to grow an additional 55,000 ducks on-site per year, generating over \$480,000 per year in new sales. The farm's sludge has been reduced by 7.3 million gallons per year, saving the company \$146,000 annually on avoided disposal costs. Each year the new system generates over 8.8 million gallons of water that are reused on-site. The anaerobic digester is producing enough biogas to run two engines for the majority of a day, producing compressed air for the two aerobic SBRs and saving HFC \$272,328 per year on avoided electricity purchases.

Contractor: Town of Riverhead IDA
County: Suffolk
ESD Region: Long Island
ESD Contact: 518/292-5340

NYS EIP Investment: \$424,800
Contractor Match: \$471,500
Total: \$896,300
Completion Date: August, 2006